

PENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|-----------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Applicant's or agent's file reference SI-19481-PCT | FOR FURTHER ACTION | see Form PCT/ISA/220 as well as, where applicable, item 5 below. |
| International application No. PCT/KR2003/002188 | International filing date (day/month/year) 18 OCTOBER 2003 (18.10.2003) | (Earliest) Priority Date (day/month/year) 19 OCTOBER 2002 (19.10.2002) |
| Applicant SAMSUNG ELECTRONICS CO. LTD. et al | | |

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. Certain claims were found unsearchable (See Box No. II)

3. Unity of invention is lacking (See Box No. III)

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 6

as suggested by the applicant.

because the applicant failed to suggest a figure.

because this figure better characterizes the invention.

b. none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2003/002188

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

The present invention discloses a mobile communication apparatus and method including a base station and a mobile station both having multi-antenna. As for the apparatus, including a base station and at least two mobile stations, the base station carries out the following functions: (a) restores weightied information and channel status information which have been decided by mobile stations from feedback signals received by mobile stations; (b) selects the downlink detect information which satisfies the largest transferring channel capacity from the above weighting information and channel status information which have been restored; (c) selects mobile stations to transmit at the same time from all mobile stations which are able to transmit using downlink detect information; and (d) processes data which will be transferred to selected mobile stations with downlink detect information. The base station has at least one base station antenna, and the mobile station has at least one mobile station antenna.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2003/002188

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 H04B 7/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 H04B 7/02, H04B 7/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
KR, JP as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|-------------------------------------------------------------------------------------------------------------------|-----------------------|
| PY | KR 2003-17946 A (SAMSUNG ELECTRONICS CO. LTD.) 04 MARCH 2003 (04.03.2003) see the whole documents | 1 - 27 |
| PY | KR 2003-33601 A (SAMSUNG ELECTRONICS CO. LTD.) 01 MAY 2003 (01.05.2003) see the whole documents | 1, 20 |
| A | KR 2001-95535 A (SAMSUNG ELECTRONICS CO. LTD.) 07 NOVEMBER 2001 (07.11.2001) see the detailed description | 1, 20 |
| A | US 5,548,834 A (BRUNO PL SUARD) 20 AUGUST 1996 (20.09.1996) see the claims and fig. 3 | 1, 20 |

 Further documents are listed in the continuation of Box C. See patent family annex.

- * Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

20 JANUARY 2004 (20.01.2004)

Date of mailing of the international search report

20 JANUARY 2004 (20.01.2004)

Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2003/002188

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|----------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| KR 2003-17946 A | 04.03.2003 | NONE | |
| KR 2003-33601 A | 01.05.2003 | NONE | |
| KR 2001-95535 A | 07.11.2001 | NONE | |
| US 5,548,834 A | 20.09.1996 | EP0639897A1 CN1117677A DE69331140D1 DE69331140T2 EP0639897A1 ES2164062T3 JP7154864A US5548834A | 22.02.1995 28.02.1996 20.12.2001 04.07.2002 22.02.1995 16.02.2002 16.06.1995 20.08.1996 |